

Remarks

Reconsideration of this Application is respectfully requested.

Claims 43-81 are pending in the application, with claims 43, 55 and 69 being the independent claims. Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 101

Paragraph 4 of the Office Action rejects claims 43-81 under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. The rejection contends that the claims "merely disclose metal steps/components for performing polynomial operation without disclosing a practical/physical application. For at least the following reasons, Applicants respectfully traverse the rejections.

Claim 43 is directed to a "programmable CPU multiplier" Claim 55 is directed to a "computer-readable storage medium comprising a CPU multiplier ... embodied in software." Claim 69 is directed to a "system." Each of the claims recites an "array unit" that includes "a first array that is used to perform arithmetic multiplication" and "a second array that is used to perform binary polynomial multiplication." That is, the array unit comprises components configured to perform different and distinct types of multiplications - one of which is not a polynomial operation, but an arithmetic operation. Such apparatuses are advantageous in certain applications. For example, as described in the specification at page 4, lines 8-10, "[i]t is desirable to provide a multiply/divide unit that supports fast polynomial multiplication and various other operations to increase the

performance of cryptographic and other systems." Thus, contrary to the rejection, claims 43, 55, and 69 are directed not to mental steps/components for performing polynomial operation, but rather to particular apparatuses that have an array unit configured in such a manner to improve performance in applications where it is advantageous to have a polynomial processor in addition to an arithmetic processor. Accordingly, Applicants respectfully submit claims 43, 55, and 69 are directed to statutory subject matter.

In addition, claims 43, 55, and 69 recite a "carry propagation adder" coupled to the first and second arrays in a particular manner. That is, "the first input of the carry propagation adder is selectively coupled to the first result output of the first array" and "the second input of the carry propagation adder is selectively coupled to the second result output of the first array and the third result output of the second array." Applicants respectfully submit this recited selective coupling of the first and second inputs of the carry propagation adder further precludes any conclusion that claims 43, 55, and 69 are directed merely to mental steps/components for performing polynomial operation.

In response to Applicants' remarks filed October 3, 2008, in paragraph 6, the Office Action contends the claims have only "general components in the computer for performing the mathematical operations." From this premise, it is concluded the claims disclose an abstract idea or performing mathematical operations in a generic computer, which is said to be nonstatutory. Applicants respectfully disagree. Whether claims 43, 55, and 69 incorporate or otherwise use general components in the computer for performing mathematical operations does not alone render claims 43, 55, and 69 unpatentable under 35 U.S.C. § 101. Simply because a claim recites a mathematical algorithm does not by itself render the claim *as a whole* directed to nonstatutory subject

matter. See, *In re Alappat*, 33 F.3d 1526, 1543-44, 31 U.S.P.Q.2d 1545, 1557, (Fed. Cir. 1994) ("[i]t is thus not necessary to determine whether a claim contains, as merely a part of the whole, any mathematical subject matter which standing alone would not be entitled to patent protection. Indeed, because the dispositive inquiry is whether the claim *as a whole* is directed to statutory subject matter, it is irrelevant that a claim may contain, as part of the whole, subject matter which would not be patentable by itself.")

Claims 43, 55, and 69 provide for an array unit having first and second arrays, each for performing a different type of multiplication operation as well as a carry propagation adder coupled to the first and second arrays of the array unit as recited in the claims. In this light, Applicants respectfully submit that, when viewed as a whole, claims 43, 55, and 69 are directed to apparatuses that enhance processing in certain applications, and therefore, are directed to statutory subject matter.

In view of at least the foregoing, Applicants respectfully assert that claims 43, 55, and 69, when viewed as a whole, are directed to statutory subject matter. Because claims 43, 55 and 69 are directed to statutory subject matter, Applicants respectfully request the Examiner reconsider and withdrawal the rejections thereto, as well as to their respective direct and indirect dependent claims, under 35 U.S.C. § 101 set forth in paragraph 4 of the Office Action.

Allowable Subject Matter

Applicants wish to thank the Examiner for indicating claims 43-81 would be allowable if rewritten to overcome the rejections thereto under 35 U.S.C. § 101 set forth in paragraph 4 of the Office Action. As explained above, Applicants respectfully submit

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claims 43-81 are directed to statutory subject matter without amendment. Because claims 43-81 are indicated as otherwise allowable, Applicants respectfully request the Examiner to pass claims 43-81 to allowance.

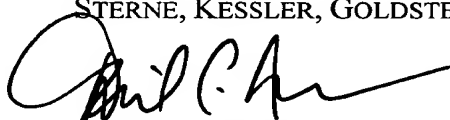
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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